INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

August 25, 2003

TO: Interested Parties / Applicant

RE: AM General LLC / SPM 141-16052-00031

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNTV-PMOD.doc 8/11/03

August 25, 2003

Mr. Rick Smith
AM General, LLC
13200 McKinley Highway
Mishawaka, Indiana 46545

Re: 141-16052
2nd Significant Permit Modification to
Part 70 No.: T 141-6023-00031

Dear Mr. Smith:

AM General Corporation was issued a Part 70 permit on February 25, 1999 for the production of Hummer vehicle. A letter requesting changes to this permit was received on September 9, 2002. Pursuant to the provisions of 326 IAC 2-7-12 (d) the change qualifies as a significant permit modification since it is a relaxation of existing conditions, and new applicable requirements will result. Therefore, this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the construction of one (1) Final Repair Station, identified as Station No. 4 (Category #8) rated at 1 unit per hour; and

The source is also requesting to be limited back to less than 15 pounds per day for the entire Spot and Repair Operations (Category #8) as required in the original PSD/SSM 141-11673-00031, instead of using Carbon Adsorbers to comply with the limit in 326 IAC 8-2-9.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Aida De Guzman, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Aida De Guzman or extension (3-4972), or dial (317) 233-4972.

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
APD
cc: File - St. Joseph County
U.S. EPA, Region V
St. Joseph County Health Department
St. Joseph Local Agency
Northern Regional Office
Air Compliance Section Inspector - Rick Reynolds
Compliance Data Section - Karen Nowak
Administrative and Development
Technical Support and Modeling - Michele Boner

PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY
and ST. JOSEPH LOCAL AGENCY

AM General Corporation
13200 McKinley Highway
Mishawaka, Indiana 46545

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) 40 CFR Part 70.6, IC 13-15 and IC 13-17..

Operation Permit No.: T141-6023-00031	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date: February 25, 1999

1st Administrative Amendment 141-12041, issued on April 20, 2000
2nd Administrative Amendment 141-12212, issued on August 22, 2000
3rd Administrative Amendment 141-12413, issued on August 4, 2000
4th Administrative amendment 141-14597, issued on July 31, 2001
1st Significant Permit Modification 141-15219, issued May 8, 2002
1st Minor Permit Modification 141-15726, issued on July 31, 2002
5th Administrative amendment 141-16221, issued on August 20, 2002

2nd Significant Permit Modification 141-16052	Pages Affected: 6, 35b, 35f, 35g, 35i, 35j, 35k, 35l, 35m, 35w
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Chief Permit Branch Office of Air Quality	Issuance Date: August 25, 2003

of resins, pigments and water. The coated vehicle will then enter the ELPO/E-coat drying oven.

The VOC and HAPs emissions from the ELPO will be controlled by a Regenerative Thermal Oxidizer

(2) Primer Surfacer/Guidecoat (Category #4) - Body sealers and/or fillers, prep operation which involves scuff sanding and manual wiping using solvent and tack cloths to remove particles, then to antichip booth, then to primer surfacer booth where the exterior will be painted and primer surfacer drying oven. The coating will be manually applied or will use automatic spray systems.

The VOC and HAPs emissions from the Primer Surfacer/Guidecoat automatic zones and from the curing oven will be controlled by a Regenerative Thermal Oxidizer. The PM overspray will be controlled by a water curtain.

(c) Topcoat System (Category #5) - This system will consists of a preparation area, which involves minor scuffing and manual wiping using solvent and tack cloths to remove particles and/or otherwise prepare the surface for painting, basecoat spray booth, clearcoat spray booth, flash-off area and natural gas-fired drying oven, repair/polish. The coating will be applied to the vehicle parts using various types of spray applicators.

The VOC and HAPs emissions from the basecoat/clearcoat automatic spray application zones and from the curing oven of the topcoat system will be controlled by a Regenerative Thermal Oxidizer. The PM overspray will be controlled by a water curtain.

(d) Vehicle Fluid Filling (Category #7) - Where gasoline, diesel, antifreeze, transmission fluid, windshield washer fluid, power steering fluid, brake fluid, engine oil, will be filled into the vehicles.

(e) Final and Spot Repair (Category #8) - This includes off-line spot and four (4) final repair stations, identified as No. 1, No. 2, No. 3 and No. 4. The PM overspray from these stations will be controlled by dry filters.

(f) Assembly Final Line (Category #9) - After the paint shop, the painted vehicle components are routed to general assembly. General assembly consists of interior and exterior trim components and glass installation, chassis, wheel/tires, powertrain and final line assembly operations. The Vehicle start-up and roll test verifies if powertrain is installed correctly.

(g) Miscellaneous Solvent Purge Usage and Cleanup (Category #10) - Solvents will be used in the body shop, paint shop, oven cleaning, general assembly areas and routine housekeeping. In the paint shop the purge material is reclaimed internally or externally to the spray application equipment.

(i) Miscellaneous Sealers and Adhesives (Category #11) - Various sealers and adhesives will be used throughout the assembly process. Majority of these sealers and adhesives will be used in the paint shop. A special sealant will be used in the vehicle glass

(c) Topcoat System (Category #5) - This system will consists of a preparation area, which involves minor scuffing and manual wiping using solvent and tack cloths to remove particles and/or otherwise prepare the surface for painting, basecoat spray booth, clearcoat spray booth, flash-off area and natural gas-fired drying oven, repair/polish. The coating will be applied to the vehicle parts using various types of spray applicators.

The VOC and HAPs emissions from the basecoat/clearcoat automatic spray application zones and from the curing oven of the topcoat system will be controlled by a Regenerative Thermal Oxidizer. The PM overspray will be controlled by a water curtain.

(d) Vehicle Fluid Filling (Category #7) - Where gasoline, diesel, antifreeze, transmission fluid, windshield washer fluid, power steering fluid, brake fluid, engine oil, will be filled into the vehicles.

(e) Final and Spot Repair (Category #8) - This includes off-line spot and four (4) final repair stations, identified as No. 1, No. 2, No. 3 and No. 4. The PM overspray from these stations will be controlled by dry filters.

(f) Assembly Final Line (Category #9) - After the paint shop, the painted vehicle components are routed to general assembly. General assembly consists of interior and exterior trim components and glass installation, chassis, wheel/tires, powertrain and final line assembly operations. The Vehicle start-up and roll test verifies if powertrain is installed correctly.

(g) Miscellaneous Solvent Purge Usage and Cleanup (Category #10) - Solvents will be used in the body shop, paint shop, oven cleaning, general assembly areas and routine housekeeping. In the paint shop the purge material is reclaimed internally or externally to the spray application equipment.

(i) Miscellaneous Sealers and Adhesives (Category #11) - Various sealers and adhesives will be used throughput the assembly process. Majority of these sealers and adhesives will be used in the paint shop. A special sealant will be used in the vehicle glass installation. These materials will be either air-dried or oven cured.

D.5.6 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volume weighted average volatile organic compound (VOC) content of coating applied to the metal part of the HUMMER II from facilities listed in items (b)(4)(a), (b)(4)(b), (b)(4)(c) and (b)(4)(i) shall be limited as follows:

Type of Coating	VOC Emissions Limit (pounds per gallon of coatings less water
Clear Coatings	4.3
Forced Warm Air Dried Coatings	3.5
Air Dried Coatings	3.5
Extreme Performance Coatings	3.5
All Other Coating	3.0

(b) The VOC limit in this condition shall be determined on a daily-volume- weighted average, using the following equation:

$$\frac{\text{Lb VOC}}{\text{Gallon less water}} = \frac{\sum \text{coatings } [D * O * Q] / [1 - w * Dc/Dw]}{\sum C}$$

Where:
Dc = density of coating, lb/gal
Dw = density of water, 8.33 lb/gal
O = weight percent organics, %
W = percent volume water, %
Q = quantity of coating, gal/unit
C = total coatings used, gal/unit

(c) The VOC input usage from the off-line Spot and four (4) Final Repair Stations, identified as No. 1, No. 2, No. 3 and No. 4 (Category #8) shall be limited to a total of less than 15 pounds per day (lbs/day). Compliance with this limit shall make 326 IAC 8-2-9 (Miscellaneous Metal Coating) not applicable. This limit shall be based on a daily-volume weighted average. This limit shall also satisfy the PSD BACT limit.

(d) Solvent sprayed from application equipment during cleanup or color changes shall be directed into appropriately designed reclaim equipment. Such equipment shall be designed to effectively capture purge solvent and minimize evaporation. The waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.5.7 Volatile Organic Compounds [326 IAC 8-1-2(a)

(1) Pursuant to 326 IAC 8-1-2(a), the Topcoat System and the Primer Surfacer/Guidecoat System VOC emission limitations specified under 326 IAC 8-2-9, shall be achieved through one (1) or any combination of the following:

(a) Thermal or catalytic incineration;

(b) Equivalent emissions limitations based on actual transfer efficiency higher than specified baseline transfer efficiency as follows:

Miscellaneous Metal Coating	Equivalent Emission Limit	
	kg/liter Solids Deposited	Lbs/gal Solids Deposited
Clear Coatings	2.08	17.3
Air Dried up to 90^0C	1.34	11.2

Extreme Performance Coatings	1.34	11.2
All Other Coatings and Coating Systems	1.01	8.4

Compliance with the equivalent emissions limits in this condition shall be determined according to the following equation:

$$E = \frac{L}{[(1-(L/D)) * (T)]}$$

Where: E = Equivalent emission limit in pounds of VOC per gallon coating solid deposited.
L = Actual VOC content in coating in pounds per gallon of coating, as applied.
D = Actual density of VOC in coating in pounds per gallon of VOC.
T = Actual measured transfer efficiency.

D.5.8 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM overspray emissions from the Primer Surfacer/Guidecoat System, Topcoat System, Spot and Final Repair operations shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.5.9 New Source Performance Standards [326 IAC 12 and 40 CFR § 60.40c, Subpart Dc]

Pursuant to 326 IAC 12 and 40 CFR § 60.40c, Subpart Dc- Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, the proposed two (2) 25 mmBtu/hr

(c) The storage tank will dispense gasoline to fuel the manufactured vehicles for testing. AM General Corporation is proposing to install submerged fill pipes and pressure relief valves on the gasoline storage tank and will employ a vapor balancing system for gasoline tank truck unloading activities, to comply with 326 IAC 8-4-6.

D.5.12 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

D.5.13 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.5.14 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) Compliance stack tests shall be performed on the Regenerative Thermal Oxidizer (RTO) to determine the operating temperature that will achieve the following destruction efficiency and to determine the capture system efficiency for each coating system:

Facility	Destruction Efficiency
ELPO/E-Coat	95%
Primer Surfacer/Guidecoat System	95%
Topcoat System	95%

(b) The Compliance stack tests for the Primer Surfacer/Guidecoat System and Topcoat System in (a) of this condition shall be made utilizing Method 25 for destruction efficiency, and or other methods as approved by the Commissioner for capture efficiency. This test shall be repeated at least once every two and a half (2.5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

(c) The compliance stack tests shall perform on the Primer Surfacer/Guidecoat, and

Topcoat, operations for PM and PM-10 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. The PM and PM10 testing is required to demonstrate that the source is not major for either pollutant, under 326 IAC 2-2, Prevention of Significant Deterioration. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

(d) The compliance tests required in (a) and (b) of this condition shall be made within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

D.5.15 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Conditions D.5.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.5.16 Permanent or Temporary Total Enclosure

(a) The capture system for the ELPO/E-Coat System and the Final Spot Repair shall meet the following criteria for a Permanent or Temporary Total Enclosure:

(1) Any Natural Draft Opening (NDO) shall be at least four (4) equivalent opening diameters from each VOC emitting point.

(2) Any exhaust point from the enclosure shall be at least four (4) equivalent duct or hood diameters from each NDO.

(3) The total area of all NDO's shall not exceed five (5) percent of the surface area of the enclosure's four (4) walls, floor, and ceiling.

(4) The average facial velocity (FV) of air through all NDO's shall be at least 3,600 meter per hour (200 fpm). The direction of air through all NDO's shall be into the enclosure.

(5) All access doors and windows whose areas are not included in Section (c) and are not included in the calculations in Section (d) shall be closed during routine operation of the process.

or

(b) Verify 100% capture through other methods as approved by the Commissioner.

D.5.17 Volatile Organic compounds

(a) The Regenerative Thermal Oxidizer (RTO) shall be in operation at all times when the ELPO/E-Coat System and the automatic zones for the Primer Surface/Guidecoat System, and Topcoat System are in operation.

(b) The RTO shall be calibrated, operated and maintained in accordance with the manufacturer's specifications.

D.5.18 Particulate Overspray

(a) The water curtains, or dry filters shall be in operation or in place at all times when the Primer Surfacer/Guidecoat System, and Topcoat System are in operation.

(b) The dry filters shall be in place at all times the Final and Spot Repair System are in

D.5.19 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

D.5.20 Performance Testing [326 IAC 3-6]

(a) All testing required in D.5.14 shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements

D.5.21 Operating Parameters

(a) The Regenerative Thermal Oxidizer shall maintain a minimum operating temperature of 1350^0F or a minimum operating temperature determined in the most recent stack tests to maintain at least 95% destruction efficiency, that is necessary to achieve compliance with condition D.5.5(c) and D.5.7. The operating temperature of the exhaust of the RTO shall be continuously recorded whenever it is operating.

D.5.22 Monitoring

(a) Daily inspections shall be performed to verify that the liquid levels and flow rates of the water curtain meets the manufacturer's recommended level. In addition, daily inspection shall be performed to verify the placement, integrity and particle loading of the Final and Spot Repair filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the Final and Spot Repair booth stacks. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Monthly inspections shall be performed of the coating emissions from the Final and Spot Repair, Surfacer/Guidecoat and Topcoat manual zones' stacks to determine the presence of paint overspray on the rooftops and the nearby ground. If overspray is observed in the course of a monthly inspection, the frequency of observations will be weekly until the cause of the overspray is determined and such cause is eliminated. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change or excessive accumulation in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response

step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.5.23 Record Keeping Requirements

(a) To document compliance with Conditions D.5.5, D.5.6, D.5.7, and D.5.21 the Permittee shall maintain records in accordance with (1) through (10) below. Records maintained for (1) through (10) shall be sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.5.5, D.5.6, D.5.7, and D.5.21.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each day for the Final and Spot Repair;

(4) The cleanup solvent usage for each month;

(5) The total VOC usage for each month;

(6) The weight of VOCs emitted for each compliance period;

(7) A statement that the rate of the liquid level and flow at the water curtain was maintained according to vendor recommended specification;

(8) Continuous recorder operating temperature readings from the RTO.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.24 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Conditions D.5.5 and D.5.6(c) shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. These reports shall be submitted to the following address:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Pursuant to 326 IAC 12 (New Source Performance Standards (NSPS)) 40 CFR Part 60.40c, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units), AM General Corporation shall report the following for boiler #1, and boiler #2:

(1) Commencement of construction date (no later than 30 days after such date);

(2) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

(3) Actual start-up date (within 15 days after such date); and

(4) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Air Quality
COMPLIANCE DATA SECTION

Quarterly Report

Source Name: AM General Corporation
Source Address: 13200 McKinley Highway, Mishawaka, Indiana 46545
Mailing Address: 13200 McKinley Highway, Mishawaka, Indiana 46545
Significant Permit Modification: 141-16052-00031
Facility: Off-Line Spot and Four Final Repair Stations (No. 1 through No. 4)
Parameter: VOC
Limits: The VOC input usage from the Spot and Final Repair (Category #8) shall be limited to total of **less than 15 pounds per day** (lbs/day). This limit shall be based on daily-volume- weighted average. This limit shall satisfy the PSD BACT limit.

Month _____ Year _____

Day	VOC Input Usage (lb/day)	Day	VOC Input Usage (lb/day)
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

Submitted by: _____Signature:_____

Title/Position: _____Date: : _____

Indiana Department of Environmental Management
Office of Air Quality
and St. Joseph Local Agency

Technical Support Document (TSD) for a Significant Permit Modification

Source Background and Description

Source Name:	AM General, LLC
Source Location:	13200 McKinley Highway
County:	St Joseph
SIC Code:	3711
Operation Permit No.:	T141-6023-00031
Operation Permit Issuance Date:	February 25, 1999
Significant Permit Modification No.:	SPM141-16052-00031
Permit Reviewer:	Aida De Guzman

The Office of Air Quality (OAQ) has reviewed a modification application from AM General, LLC relating to the installation of the following:

(a) One (1) Final Repair Station, identified as Station No. 4 (Category #8) rated at 1 unit per hour

The source is also requesting to be limited back to less than 15 pounds per day for the entire Spot and Repair Operations as required in the original PSD/SSM 141-11673-00031, instead of using Carbon Adsorbers to comply with the limit in 326 IAC 8-2-9.

History

On September 9, 2002, AM General, LLC submitted an application to the OAQ requesting to add additional repair station to their existing plant. AM General, LLC was issued a Part 70 permit 141-6023-00031 on February 25, 1999. On June 28, 2000, AM General was issued a PSD/Significant Source Modification 141-11673-00031, which includes the Final and Spot Repair operation. The TSD on this PSD permit mentioned that the Final and Spot Repair PSD BACT was a limit of 2.7 tons/year or < less than 15 pounds per day, but was not mentioned in the PSD permit.

Existing Approvals

The source was issued a Part 70 Operating Permit T141-6023-00031 on February 25, 1999. The source has since been operating under previous approvals including, but not limited to the following:

(a) First Administrative Amendment No.: 141-12041, issued on April 20, 2000;

(b) Second Administrative Amendment No.: 141-12212, issued on August 22, 2000;

(c) Third Administrative Amendment No.: 141-12413, issued on August 4, 2000;

(d) Fourth Administrative Amendment No.: 141-14597, issued on July 31, 2001;

(e) First Significant Permit Modification 141-15219, issued May 8, 2002

(f) First Minor Permit Modification No.: 141-15726, issued on July 31, 2002; and

(g) Fifth Administrative Amendment No.: 141-16221, issued on August 20, 2002.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 9, 2002. A change in the application was received on November 26, 2002. Additional information pertaining to the BACT analysis for the Final and Spot Repair was submitted on May 21, 2003 and July 14, 2003.

Emission Calculations

(a) Final Repair Station No. 4: See Page 1 and 2 TSD Appendix A for detailed VOC and HAPs emission calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Pollutant	Potential To Emit (tons/year)
PM	0.52
PM-10	0.52
SO_2	0.0
VOC	2.94
CO	0.0
NO_x	0.0

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Toluene	0.01
Xylenes	0.25
Ethylbenzene	0.25
TOTAL	0.51

Justification for the Approval Level

The installation of one additional repair station, by itself will qualify as a "revision to descriptive information" under Administrative Amendment, since its VOC emissions of 2.94 tons per year are below the minor source modification threshold of 10 tons per year. However, the source has requested to be limited back to the original requirement of less than 15 pounds per day for the entire Spot and Repair Operations, which involves a PSD BACT revisions and significant changes/deletions to existing monitoring requirements. Therefore, a Significant Permit Modification will be issued, pursuant to the provisions of 326 IAC 2-7-12(d).

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	not determined

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

(a) New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60):
There are no NSPS applicable to this modification.

(b) National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63):
There are no NESHAPs applicable to this source.

State Rule Applicability - Entire Source

(a) 326 IAC 5-1 (Visible Emissions Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(b) 326 IAC 2-2 (PSD BACT)
The Final and Spot Repair was originally permitted in PSD permit 141-11673-00031 issued on June 28, 2000. The TSD in this PSD permit mentioned that the Final and Spot Repair PSD BACT was a limit of 2.7 tons/year or < less than 15 pounds per day and to also avoid the applicability of 326 IAC 8-2-9. However, this limit was not mentioned in the PSD permit. Later on the source requested that a carbon adsorber be installed in order to comply with 326 IAC 8-2-9 and the BACT. Now the source requests to be limited back to less than 15 pounds per day.

Since this change is a change in BACT, a new BACT analysis was submitted by the

source as follows:

The BACT analysis for VOC submitted by the source has been conducted in accordance with the "Top Down BACT Guidance" U.S. EPA.

(1) AM General identified the following automobile and truck manufacturing sources listed in the BACT/RACT/LAER Clearinghouse:

Source and Address	PSD BACT
Toyota Motor Manufacturing Indiana, Inc. - Princeton, Indiana	4.8 lbs/gallon less water
General Motors Delta Township - Michigan	4.8 lbs/gallon less water as applied
General Motors Lansing Grand River Assembly - Lansing, Michigan	4.8 lbs/gallon less water as applied
General Motors Assembly Plant Flint, Michigan	4.8 lbs/gallon less water as applied
Ford Motor Company Truck Plant - Michigan	4.8 lbs/gallon less water as applied
AM General, LLC	Less than 15 pounds per day

BACT Limit:

The 4.8 pounds per gallon less water limit for the above sources was based on RACT rule for automobile and light duty truck. AM General's HUMMER 2 is not categorized as a light duty truck, it is subject to RACT rule for miscellaneous metal coating under Indiana rule, 326 IAC 8-2-9, which limits AM General to less than 15 pounds per day to avoid this rule. **Therefore, the PSD BACT limit for the Final and Spot Repair is a VOC limit to less than 15 pounds per day.**

State Rule Applicability - Individual Facilities

(a) 326 IAC 8-2-9 (Miscellaneous Metal Coating)
This rule mandates a limit of 3.5 pounds per gallon less water for extreme performance coatings. The Final Repair Station No. 4 together with the existing Spot and Final Repair Operation (Category #8) will be limited to less than 15 pounds per day VOC input usage, therefore, 326 IAC 8-2-9 will not be applicable.

Compliance Requirements

Permits issued under 326 IAC 2-7are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as

grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Changes to the Part 70 Permit

(1) Section A.2(3), item (e):

(e) Final and Spot Repair (Category #8) - This includes off-line spot and ~~three (3)~~ **four (4)** final repair stations, **identified as No. 1, No. 2, No. 3 and No. 4** ~~each final repair station is controlled by a Carbon Adsorber~~. The PM overspray from these stations will be controlled by dry filters.

(2) Section D.5 project description table:

SECTION D.5

(a) through (d) no changes

(e) Final and Spot Repair (Category #8) - This includes, off-line spot and **four** final repair stations, **identified as No. 1, No. 2, No. 3 and No. 4**. The PM overspray from these stations will be controlled by dry filters.

(3) Condition D.5.6:

D.5.6 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volume weighted average volatile organic compound (VOC) content of coating applied to the metal part of the HUMMER II **from facilities listed in items (b)(4)(a), (b)(4)(b), (b)(4)(c) and (b)(4)(i)** shall be limited as follows:

Type of Coating	VOC Emissions Limit (pounds per gallon of coatings less water
Clear Coatings	4.3
Forced Warm Air Dried Coatings	3.5
Air Dried Coatings	3.5
Extreme Performance Coatings	3.5
All Other Coating	3.0

(b) The VOC limit in this condition shall be determined on a daily-volume- weighted average, using the following equation:

$$\frac{\text{Lb VOC}}{\text{Gallon less water}} = \frac{\sum \text{coatings } [D * O * Q] / [1 - w * Dc/Dw]}{\sum C}$$

Where:
Dc = density of coating, lb/gal
Dw = density of water, 8.33 lb/gal
O = weight percent organics, %
W = percent volume water, %
Q = quantity of coating, gal/unit
C = total coatings used, gal/unit

(c) The VOC input usage from the off-line Spot and four (4) Final Repair Stations, identified as No. 1, No. 2, No. 3 and No. 4 (Category #8) shall be limited to a total of less than 15 pounds per day (lbs/day). Compliance with this limit shall make 326 IAC 8-2-9 (Miscellaneous Metal Coating) not applicable. This limit shall be based on a daily-volume weighted average. This limit shall also satisfy the PSD BACT limit.

~~(c~~ **d**) Solvent sprayed from application equipment during cleanup or color changes shall be directed into appropriately designed reclaim equipment. Such equipment shall be designed to effectively capture purge solvent and minimize evaporation. The waste solvent shall be disposed of in such a manner that evaporation is minimized.

(4) Condition D.5.7:

D.5.7 Volatile Organic Compounds [326 IAC 8-1-2(a)

(1) Pursuant to 326 IAC 8-1-2(a), the Topcoat System and the Primer Surfacer/Guidecoat System VOC emission limitations specified under 326 IAC 8-2-9, shall be achieved through one (1) or any combination of the following:

(a) Thermal or catalytic incineration;

(b) Equivalent emissions limitations based on actual transfer efficiency higher than specified baseline transfer efficiency as follows:

Miscellaneous Metal Coating	Equivalent Emission Limit	
	kg/liter Solids Deposited	Lbs/gal Solids Deposited
Clear Coatings	2.08	17.3
Air Dried up to 90^0C	1.34	11.2
Extreme Performance Coatings	1.34	11.2
All Other Coatings and Coating Systems	1.01	8.4

Compliance with the equivalent emissions limits in this condition shall be determined according to the following equation:

$$E = \frac{L}{[(1-(L/D)) * (T)]}$$

Where: E = Equivalent emission limit in pounds of VOC per gallon coating solid deposited.
L = Actual VOC content in coating in pounds per gallon of coating, as applied.
D = Actual density of VOC in coating in pounds per gallon of VOC.
T = Actual measured transfer efficiency.

~~(2) Pursuant to 326 IAC 8-2-9, the volatile organic compounds (VOC) content of the coatings applied at the Final and Spot Repair Booth shall be limited as follows:~~

~~Type of Coating~~	~~VOC Emissions Limit (pounds per gallon of coatings less water~~
~~Clear Coatings~~	~~4.3~~
~~Extreme Performance Coatings~~	~~3.5~~

~~Pursuant to 326 IAC 8-1-2(a), the Final and Spot Repair (Category # 8) shall achieve compliance with the above limits using a Carbon Adsorption System for Final Repair. The operation of the Carbon Adsorption System shall also be considered the PSD BACT for Final Repair operation.~~

(5) Condition D.5.14 - Section (c) that is referenced in section (d) was deleted since the PM/PM10 stack testing has already been made and just awaiting CDS validation.

D.5.14 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) Compliance stack tests shall be performed on the Regenerative Thermal Oxidizer (RTO) to determine the operating temperature that will achieve the following destruction efficiency and to determine the capture system efficiency for each coating system:

Facility	Destruction Efficiency
ELPO/E-Coat	95%
Primer Surfacer/Guidecoat System	95%
Topcoat System	95%

(b) The Compliance stack tests for the Primer Surfacer/Guidecoat System and Topcoat System in (a) of this condition shall be made utilizing Method 25 for destruction efficiency, and or other methods as approved by the Commissioner for capture efficiency. This test shall be repeated at least once every two and a half (2.5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

(c) ~~Compliance stack tests for the three (3) Carbon Adsorbers controlling the three (3) Final Repair Stations shall be made utilizing Method 25 to determine the maximum VOC concentration in the exhaust vent stream from the carbon adsorbers that will achieve a minimum removal efficiency of 85% required to comply with the limits in 326 IAC 8-2-9 and or other methods as approved by the Commissioner for capture efficiency. This test shall be repeated at least once every two and a half (2.5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require~~

~~compliance testing when necessary to determine if the facility is in compliance..~~

(~~d~~ **c**) The compliance stack tests shall perform on the Primer Surfacer/Guidecoat, and Topcoat, operations for PM and PM-10 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. The PM and PM10 testing is required to demonstrate that the source is not major for either pollutant, under 326 IAC 2-2, Prevention of Significant Deterioration. ~~This test shall be repeated at least once every two and half (2.5) years from the date of this valid compliance demonstration~~. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

(d) The compliance tests required in (a) **and** (b) ~~and (c)~~ of this condition shall be made by September 30, 2002 at maximum production capacity or its capacity at the time of testing. Another test shall be performed if the initial test was conducted at less than 95% capacity, and be made sixty (60) days after achieving maximum production.

(6) Condition D.5.17:

D.5.17 Volatile Organic compounds

(a) The Regenerative Thermal Oxidizer (RTO) shall be in operation at all times when the ELPO/E-Coat System and the automatic zones for the Primer Surface/Guidecoat System, and Topcoat System are in operation.

(b) The RTO shall be calibrated, operated and maintained in accordance with the manufacturer's specifications.

~~(c) When either Final Repair Station is in operation its respective Carbon Adsorber shall be in operation at all times.~~

(7) Condition D.5.21:

D.5.21 Operating Parameters

(a) The Regenerative Thermal Oxidizer shall maintain a minimum operating temperature of 1350^0F or a minimum operating temperature determined in the most recent stack tests to maintain at least 95% destruction efficiency, that is necessary to achieve compliance with condition D.5.5(c) and D.5.7. The operating temperature of the exhaust of the RTO shall be continuously recorded whenever it is operating.

~~(b) The Permittee shall maintain a maximum VOC concentration in the exhaust vent stream from the carbon adsorbers determined in the most recent stack tests to maintain at least 85% VOC removal, that is necessary to achieve compliance with the VOC limits in 326 IAC 8-2-9. This VOC concentration shall be measured and recorded once per shift at each Final Repair Station. The source shall be considered to be out of compliance if the outlet VOC concentration averaged over any continuous 24-hour period is greater than the maximum value established during the most recent compliance demonstration; and~~

~~(c) All carbon in each control device shall be replaced with fresh carbon quarterly, or more frequently depending upon the VOC concentration readings in item (b) of this condition.~~

(8) Condition D.5.22 - The original monitoring condition D.5.22 as stated in the permit is intended for a wet scrubber. The source has indicated that this control unit for overspray control is really a "water curtain", but just wanted to call it a wet scrubber. Therefore, to avoid confusion the term "water curtain" and its parameters will be used in the condition instead of a wet scrubber. The overspray observation is not necessary for the Surfacer/Guidecoat, since they are controlled by a Regenerative Therrnal Oxidizer. However, daily inspection of the filters and weekly

observation of the overspray for the Final and Spot Repair is still necessary. Compliance Section has also been consulted by the source regarding the following change:

D.5.22 Monitoring

(a) Daily inspections shall be performed to verify that the liquid levels and flow rates of the ~~wet scrubbers~~ **water curtain** meets the manufacturer's recommended level. ~~To monitor the performance of the wet scrubbers, the scrubbant level of the wet scrubbers shall be maintained weekly at a level where surface agitation indicates impact of the air flow. To monitor the performance of the baffles, weekly inspections of the baffle panels shall be conducted to verify placement and configuration meet recommendations of the manufacturer.~~ **In addition, daily inspection shall be performed to verify the placement, integrity and particle loading of the Final and Spot Repair filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the Final and Spot Repair booth stacks.** ~~the surface coating booths (Primer Surfacer/Guidecoat, Topcoat and Final and Spot Repair exhaust stacks while one or more of the booths are in operation.~~ The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Monthly inspections shall be performed of the coating emissions from the **Final and Spot Repair, Surfacer/Guidecoat and Topcoat manual zones'** stack**s** to determine the presence of paint overspray on the rooftops and the nearby ground. **If overspray is observed in the course of a monthly inspection, the frequency of observations will be weekly until the cause of the overspray is determined and such cause is eliminated.** The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change or excessive accumulation in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

(9) Condition D.5.23:

D.5.23 Record Keeping Requirements

(a) To document compliance with Conditions D.5.5, D.5.6, D.5.7, and D.5.21 the Permittee shall maintain records in accordance with (1) through (10) below. Records maintained for (1) through (10) shall be sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.5.5, D.5.6, D.5.7, and D.5.21.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each day **for the Final and Spot Repair**;

(4) ~~The Carbon Adsorbers outlet VOC concentration readings per shift;~~

~~(5)~~ ~~The date/time each carbon bed is cleaned or replaced;~~

(~~6~~ **4)** The cleanup solvent usage for each month;

(~~7~~ **5**) The total VOC usage for each month;

(~~8~~ **6**) The weight of VOCs emitted for each compliance period;

(~~9~~ **7**) A statement that the rate of the liquid level and flow at the water curtain was maintained according to vendor recommended specification;

(~~10~~ **8**) Continuous recorder operating temperature readings from the RTO.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(10) The following Report Form will be added in the Part 70 permit as the limit for the Final and Spot Repair operations has been reinstated:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Air Quality
COMPLIANCE DATA SECTION

Quarterly Report

Source Name: AM General, LLC Corporation
Source Address: 13200 McKinley Highway, Mishawaka, Indiana 46545
Mailing Address: 13200 McKinley Highway, Mishawaka, Indiana 46545
Significant Permit Modification: 141-16052-00031
Facility: Off-Line Spot and Four Final Repair Stations (No. 1 through No. 4)
Parameter: VOC
Limits: The VOC input usage from the Spot and Final Repair (Category #8) shall be limited to **a total of less than 15 pounds per day** (lbs/day). This limit shall be based on daily-volume- weighted average. This limit shall also satisfy the PSD BACT limit.

Month _____ Year _____

Day	VOC Input Usage (lb/day)	Day	VOC Input Usage (lb/day)
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

Submitted by: _____Signature:_____

Title/Position: _____Date: : _____

Conclusion

The modification on the repair operation shall be subject to the conditions of the attached **Significant Permit Modification No. 141-16052-00031.**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: AM General Corporation
Address City IN Zip: 13200 McKinley Highway, Mishawaka, IN 46545
SPM No.: 141-16052
Plt ID: 141-00031
Reviewer: Aida De Guzman
Date Application Received: Sept. 9, 2002

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC Uncontrolled tons per year	Uncontrolled Particulate Potential (ton/yr)	Controlled Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	Summation Coatings
Fourth Final Repair Station																		
Basecoat (Sunset Orange Metallic)	8.5	57.65%	0.0%	57.7%	0.0%	37.00%	0.13120	1.000	4.90	4.90	0.64	15.43	2.82	0.52	0.01	13.24	75%	0.630054544
Clearcoat (Ureclear Clearcoat)	8.4	61.00%	0.0%	61.0%	0.0%	52.00%	0.13120	1.000	5.12	5.12	0.67	16.13	2.94	0.47	0.01	9.85	75%	0.66666656
Coatings Weighted Average							*0.26240*		*4.94*									*1.296721104*
											Potential To Emit		**2.94**	**0.52**	**0.01**			

4.94 >3.5 limit in 326 IAC 8-2-9, the source however requested to be limited back to < 15 pounds/day for the entire Spot and Final Repair (Category #8) as required in the original PSD/SSM 141-11673-00031.

METHODOLOGY

PTE = worst case coating + sum of all solvents
Dry Filters Efficiency = 98%
Only the Final Repair is controlled by the Carbon Adsorber with 100% capture and 85% VOC removal Efficiency.
Summation Coatings = Sum Coatings (Densitycoat * Wt % Org. * quantity of coatings, gal/unit) / (1-vol % water * Densitycoat/density water)
Volume Weighted Average = Summation Coatings / Total coatings Used
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: AM General Corporation
Address City IN Zip: 13200 McKinley Avenue, Mishawaka, IN 46545
SPM#: 141-16052
Plt ID: 141-00031
Permit Reviewer: Aida De Guzman
Date Application Received: Sept. 9, 2002

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Ethylbenzene	Weight % Methanol	Xylene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Methanol Emissions (ton/yr)
Final Repair Station 4									
Sunset Orange Metallic	8.5	0.132100	1.00	5.00%	5.00%	0.00%	0.25	0.25	0.00
Medium Sage Green	8.51	0.132100	1.00	5.00%	5.00%	0.00%	0.25	0.25	0.00
Olympic White	10.5	0.132100	1.00	5.00%	5.00%	0.00%	0.30	0.30	0.00
Redfire Metallic	8.42	0.132100	1.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Black Basecoat	8.2	0.132100	1.00	10.00%	5.00%	0.00%	**0.47**	0.24	0.00
Yellow Basecoat	10.5	0.132100	1.00	5.00%	5.00%	0.00%	0.30	**0.30**	0.00
Pewter Mettalic	8.6	0.132100	1.00	5.00%	5.00%	5.00%	0.00	0.25	**0.25**

Total State Potential Emissions	Worst Single HAP	**0.47**	**0.30**	**0.25**
	Combined HAPs		**1.02**	

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs